

Table of Contents

The proceedings papers contained in this volume were originally published in AIP Conference Proceedings 1581 and are copyrighted by AIP Publishing LLC. The online versions of these articles on the AIP Scitation site (<http://scitation.aip.org/content/aip/proceeding/aipcp/1581>) serve as the versions of record for citation purposes. Please cite AIP Publishing's online version when referencing any of the articles.

Non-Destructive Measurement and Role of Surface Residual Stress Monitoring in Residual Life Assessment of a Steam Turbine Blading Material

G. Prabhu-Gaunkar^a, M. S. Rawat^b, and C. R. Prasad^b

^aIndian Institute of Technology, Bombay, India

^bBharat Heavy Electrical Ltd., R & D, Vikas Nagar, Hyderabad, India

Non-Destructive Testing of Biaxial Stress State in Ferromagnetic Materials

V. L. Vengrinovich, D. A. Vintov, and D. V. Dmitrovich

Laboratory of computerized diagnostics, Institute of Applied Physics of the National Academy of Sciences, Minsk, Republic of Belarus

Insight on the Inconsistencies of Barkhausen Signal Measurements for Radiation Damage on Nuclear Reactor Steel

S. Pirfo Barroso^a, Michael E. Fitzpatrick^a, Ferenc Gillemot^b, Marta Horváth^b, Ákos Horváth^b and Richard Szekely^b

^aMaterials Engineering, The Open University, Milton Keynes, United Kingdom

^bHungarian Academy of Sciences Centre for Energy Research (MTA EK), Budapest, Hungary

Investigation of Weldments in Victoria-Class Submarine Pressure-Hull using Magnetic Flux Leakage and Barkhausen Noise

A. A. Samimi^{a, b}, V. Babbar^a, T. W. Krause^b and L. Clapham^a

^aApplied Magnetics Group, Queen's University, Kingston, Ontario, Canada

^bNDE Development, Royal Military College of Canada, Kingston, Ontario, Canada

Auto-Calibration Principles for Two-Dimensional Residual Stress Measurements by Barkhausen Noise Technique

U. Cikalova, J. Schreiber, S. Hillmann, and N. Meyendorf

Fraunhofer Institute for Nondestructive Testing, IZFP Dresden Branch, Dresden, Germany

Barkhausen Discontinuities and Hysteresis of Ferromagnetics. New Stochastic Approach

V. Vengrinovich

Institute of Applied Physics of the Belarus Academy of Sciences, Minsk, Belarus

Utilization of Frequency-Domain Information of Barkhausen Noise Signal in Quantitative Prediction of Material Properties

A. Sorsa^a, S. Santa-aho^b, M. Vippola^b, T. Lepistö^b and K. Leiviskä^a

^aUniversity of Oulu, Control Engineering Laboratory, Oulu, Finland

^bTampere University of Technology, Department of Materials Science, Tampere, Finland

Monitoring of Surface Burn after Grinding Larger Bearing Rings

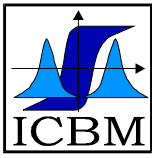
M. Neslušán, A. Mičietová, and M. Čilliková

Faculty of Mechanical Engineering, University of Žilina, Žilina, Slovak Republic

Improved Grinding Quality Inspection of Large Bearing Components Using Barkhausen Noise Analysis

F. M. Kolarits

The Timken Company, Timken Technology Center, Canton, OH, USA



Analysis of Surface Integrity of Grinded Gears Using Barkhausen Noise Analysis and X-Ray Diffraction

L. Vrkoslavová^a, Petr Louda^a, and Jiří Malec^b

^aInstitute for Nanomaterials, Advanced Technologies and Innovation, Technical University of Liberec, Czech Republic

^bDepartment of Analytic Services, PCS s.r.o., Czech Republic

The Application of Wavelet Shrinkage Denoising to Magnetic Barkhausen Noise Measurements

J. Thomas

American Stress Technologies, Inc., Pittsburgh, PA, USA

A New Barkhausen Noise Technique for Applications at Miniaturized Geometries

S. Hillmann and N. Meyendorf

Fraunhofer Institute for Nondestructive testing, IZFP Dresden Branch, Dresden, Germany

Improving the Accuracy of Case Depth Measurements in Carburized Steel Using a Combination of Electromagnetic Test Methods

R. Meyendorf and D. Eylon

University of Dayton, Department of Chemical and Materials Engineering, Dayton, OH, USA

Case Depth Verification of Hardened Samples with Barkhausen Noise Sweeps

Suvi Santa-aho^a, Merja Hakanen^b, Aki Sorsa^c, Minnamari Vippola^a, Kauko Leiviskä^c and Toivo Lepistö^a

^aTampere University of Technology, Department of Materials Science, Tampere, Finland

^bStresstech Oy, Vaajakoski, Finland

^cUniversity of Oulu, Control Engineering Laboratory, Oulu, Finland

Detection System for Inclusion Defects in Hot-Rolled Steel Plates Using MFLT with Two Different Magnetizing Strengths

J. Yotsuji and T. Koshihara

JFE Corporation, Instrument and Control Engineering Research Department, Kawasaki, Kanagawa, Japan

Magnetic Barkhausen Noise for Reliable Detection of the Heat Affected Zone in Welded Ship Steel Plate

M. M. Blaow^a and B. A. Shaw^b

^aDepartment of Materials Science and engineering, Faculty of Engineering, University of Misurata, Libya

^bDesign Unit, School of Mechanical and Systems Engineering, University of Newcastle upon Tyne, UK